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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,514	09/30/2003	Hideaki Miyoshi	243294US6YA	1592

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EXAMINER	
ARANCIBIA, MAUREEN GRAMAGLIA	
ART UNIT	**PAPER NUMBER**
1763	

NOTIFICATION DATE	DELIVERY MODE
04/24/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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c

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/673,514	Applicant(s) MIYOSHI ET AL.	
	Examiner Maureen G. Arancibia	Art Unit 1763	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 29 March 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1-8 and 11-19*.
   Claim(s) withdrawn from consideration: *20-49*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____
13. ☒ Other: See Continuation Sheet.

Maureen G. Arancibia

PARVIZ HASSANZADEH
SUPERVISORY PATENT EXAMINER

Continuation of 3. NOTE: The proposed amendment to independent Claim 1 to recite maintaining the plasma while the first RF frequency of the RF source is being changed to the second RF frequency of the first RF source further limits the scope of the claims beyond what was previously presented, and would require further consideration and/or search.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments filed 29 March 2007 have been fully considered but, in so far as they still apply, they are not persuasive.

In response to applicant's arguments against the references individually, specifically that secondary reference Tsuchiya et al. does not teach that RF signals from separate RF sources are applied to a common electrode, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Specifically in regards to applicant's argument that Tashiro et al. does not teach all of the steps of the claimed method, and that Tashiro et al. teaches that the disclosed method of Tashiro et al. results in increased deposition rates of "good amorphous silicon," this is to consider only the teachings of a single reference where the rejection is based on the combination of two references, Tashiro et al. and Tsuchiya et al. It is the teachings of Tsuchiya et al. that would have motivated one of ordinary skill in the art to make the modifications to the method of Tashiro et al. as discussed in the rejection above, with a reasonable expectation of success in attaining the benefits taught by Tsuchiya et al. and discussed above. Moreover, just because a reference teaches a different way of attaining a desired result, even what the reference considers to be the best way of attaining the result, does not mean that the reference teaches away from any other way of attaining the desired result. Examiner maintains that while Tashiro et al. may discuss some problems with the prior art of Tashiro et al., and disclose what Tashiro et al. believes to be the best way of overcoming the problems with the prior art, Tashiro et al. does not teach away from a combination with Tsuchiya et al., with the motivation and cited benefits of the teachings of Tsuchiya et al. Nor would one of ordinary skill in the art at the time the invention was made, upon reading Tashiro et al., have been led in a direction divergent from the path that was taken by Applicant (as asserted in Applicant's citation of In re Gurley). Rather, one of ordinary skill in the art at the time the invention was made, upon reading Tashiro et al., would have been led to implement a method of operating a plasma processing system with a dual-RF frequency supply to a single electrode, and would have been motivated, upon reading Tsuchiya et al., to modify that method in the manner suggested as beneficial by Tsuchiya et al.

It is also noted that Tsuchiya et al. is a secondary reference relied on in the rejection of independent Claim 1 for the teaching that a higher RF frequency can be used to ignite the plasma and a lower RF frequency can be used to sustain the plasma, with the benefit of increasing plasma generation efficiency by igniting the plasma with a frequency in the VHF band, but avoiding weakening the sheath electric field by having the frequency being too high during processing. It is the teachings of Tashiro et al. that are to be modified by the teachings of Tsuchiya et al., not the reverse.

In response to applicant's argument that the matching elements and protective circuits of Tsuchiya et al. are not designed for providing protection at two different frequencies or to match the frequency change from VHF range to HF range, and that Tsuchiya et al. teaches a dual electrode, separate power supply apparatus where Tashiro et al. teaches a single electrode, single power supply apparatus, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Finally, the reference U.S. Patent 5,882,424 to Taylor et al., previously made of record, is again noted. Applicant's attention is drawn to Taylor et al.'s teaching of the method recited in Claim 1, namely a method comprising the steps of igniting a plasma by applying to a first electrode a first RF signal with a higher RF frequency, and thereafter providing to the same electrode a second RF signal with a lower RF frequency to sustain the plasma. (Column 7, Lines 6-13)

Continuation of 13. Other: PTO-892 citing the official English translation of Tashiro et al.